

Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford (RL-0040)

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***Completed excavation for 29,000 tons of
contaminated soil in the BC Control Area***

Overview

This section addresses Project Baseline Summary (PBS) RL-0040, *Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford*. There are three major components to this work scope:

- Deactivation & Decommissioning (D&D) [R. E. Wilkinson],
- Waste Sites Remediation [B. H. Ford], and
- Reliability Projects [R. M. Nichols].

NOTE: Unless otherwise noted, all information contained herein is as of the end of September 2008.

Top FY 2008 Accomplishments

Deactivation and Decommissioning

- **231-Z Inventory Reduction**
 - Completed 231-Z Nuclear Facility Hazard Reduction.
- **BC Control Area**
 - Completed excavation for 29,000 tons of contaminated soil in the BC Control Area.
- **200 North Area**
 - Submitted the 212-N, P & R Building Engineering evaluation/cost analysis (EE/CA) to regulators.
 - Submitted the Remedial Action Work Plan (RAWP) Rev 0 to the regulators.
- **U Plant Regional Closure Zone**
 - Obtained approval of Central Plateau Facility Decommissioning Agreement in Principle (AIP) by regulators.
- **Surveillance and Maintenance Activities**
 - Completed draining the PUREX V-11 tank and shipment to the Effluent Treatment Facility.
- **Waste Site Remediation**
 - Completed trench B-56 excavation (BC Cribs Treatability Test).
 - Completed Remedial Investigation for the SC-1 Operable Unit (OU).
 - Completed EE/CAs for MG-1 and MG-2, three months ahead of the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) milestone schedule.
 - Completed first phase of characterization of soils around underground pipelines (IS-1 OU).
 - Completed characterization of contaminated soils south of the PUREX facility; began development of the related Feasibility Study.
- **Reliability Projects**
 - Completed modifications and upgrades to 181B and 182B facilities to minimize chances of an event that could disrupt the flow of export water to the 200 Area Plateau (Project L-626, *100B Area Export Water System Reliability Enhancements*).
 - Completed mortar lining of a 12-inch diameter sanitary water line located in the 200 East Area that furnishes water to the 200 East Tank Farm facilities and the Waste Treatment Plant (Project L-429, *Mortar Lining 4th Street – 200 East Area*).

Top FY 2008 Accomplishments (continued)

- **Reliability Projects, continued**

- Implemented DOE Order 430.1B, *Real Property Asset Management*.
 - Published Hanford Ten Year Site Plan.
 - Revised Project Hanford Management System documents impacted by implementation of DOE Order 430.1B.
 - Achieved green scorecard rating at DOE-HQ Facilities Information Management System validation.
 - Completed National Environmental Policy Act 5-Year Supplemental Analysis for the final Hanford Comprehensive Land Use Plan Environmental Impact Statement.

Notable September Accomplishments

Deactivation and Decommissioning

- **BC Control Area**
 - Completed excavation for 29,000 tons of contaminated soil in the BC Control Area.
- **200 North Area**
 - Submitted EE/CA for 212-N, P, & R Buildings to regulators.
 - Submitted RAWP Rev 0 to regulators.
- **U Plant Regional Closure Zone**
 - Obtained approval of Central Plateau Facility Decommissioning AIP by regulators.
- **Multi-Incremental Sampling (MIS)**
 - Completed Biological/Cultural/Historical Review.
 - Obtained approval by regulators of the Rev. 0 of the Sample Protocol Test Sample Analysis Plan (SAP).
- **Waste Site Remediation**
 - Issued BC Cribs ERC Validation Report
 - Completed gamma and neutron logging of the sixteen shallow Direct Push Technology (DPT) boreholes in 200-B-53A trench.
 - Completed eight DPT boreholes and slim-line gamma logging in 200-B-14 Crib.
 - Installed vapor extraction wells for BC Cribs soil desiccation testing .
 - Submitted 200-CS-1 Rev. 0 Feasibility Study/Proposed Plan and Treatment, Storage and Disposal (TSD) closure plans to RL.
 - Completed geophysical logging for 200-CW-1 shallow DPT boreholes in 216-T-4B and B Pond.
 - Completed 200-SW-1/2 Remedial Investigation/Feasibility Study Work Plan for public release.
 - Issued draft West Lake Sample and Analysis Plan (SAP) for internal review.
 - Completed 216-B-6 direct push.
- **Reliability Projects**
 - Completed Conceptual Design Report for Project L-336, 200 East and East Areas Clearwells Modifications (FY 2010 – FY 2011 Project).
 - Completed Executive Order 13423, Transformational Energy Action Management Initiatives, and DOE Order 430.2B gap analysis related to the National Energy Policy Act.
 - Received (2) 50-ton low boy trailers for Crane and Rigging and Transportation.

FY 2008 Funds vs. Actuals (\$M)

	September 2008 Actual Funding	FY 2008 Actual Costs	Variance
Nuclear Facility D&D, Remainder of Hanford	\$ 87.7	\$ 84.5	\$ 3.1

Schedule/Cost Performance (\$M)

Nuclear Facility D&D, Remainder of Hanford	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion (FY08/ CTD)
Current Period (Month)	\$13.2	\$9.4	\$13.7	-\$3.8	-28.6%	-\$4.3	-45.1%	\$80.2
Cumulative-to-Date (FY 2004-Present)	\$335.8	\$324.6	\$317.7	-\$11.2	-3.3%	\$6.8	2.1%	\$335.8

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$11.2M/-3.3%):

The unfavorable schedule variance (SV) for the D&D Project (-\$1.0M) is primarily due to the following:

- Delays in awarding the procurement of the front end loader, and delays in completion of 200-UW-1 workscope (High Resolution Resistivity [HRR], Record of Decision [ROD], and U-361 Tank Study) resulting from lack of resources.

The unfavorable SV for Waste Site Remediation (-\$3.2M) is primarily due to:

- Delays associated with the 200-PW-2/4 Uranium-Rich Process (-\$0.5M), the 200-CW-1 Gable Mtn/ B Pond Chemical Waste Group (-\$0.8M), and with the 200-IS-1 Tanks/Boxes/Pits/Lines Group.

The unfavorable SV for Reliability Projects (-\$1.4M) is due to:

- L-449, *Mortar Line 12-Inch Water Line – Baltimore*, construction delays pending completion of long term procurement of isolation valves.
- L-614, *Repeater Sites Safety Renovations*, aggressive construction schedule slightly behind pending completion of RL-directed redesign.
- Delays in procurement of replacement ambulances.
- Additional work scope requirements requested by RL extended the Energy Policy Acts schedule.

CTD Cost Performance (+\$6.8M/+2.1%):

The favorable cost variance (CV) for D&D (+\$3.7M) is primarily due to the following:

- Prior year cost overruns in 200-UW-1 U Zone Waste Site Remediation (-\$4.4M) resulting from:
 - Additional direct push sampling during field investigation to determine contamination levels.
 - Greater than planned effort to resolve Feasibility Study/Planning Package (FS/PP) comments and Remedial Design SAP.
 - Delays in barrier construction without reductions in staffing levels.
 - Lateral spread of contamination at 200-W-42 resulting in more waste containers being shipped to the Environmental Restoration Disposal Facility (ERDF) than planned.
- Offset by prior and current year efficiencies (S&M, PM&S, and D&D) and variance distributions (+\$8.1M).

Schedule/Cost Performance (\$M), continued

CTD Cost Performance (+\$6.8M/+2.1%):

The unfavorable CV for Waste Site Remediation (-\$1.4M) is primarily due to:

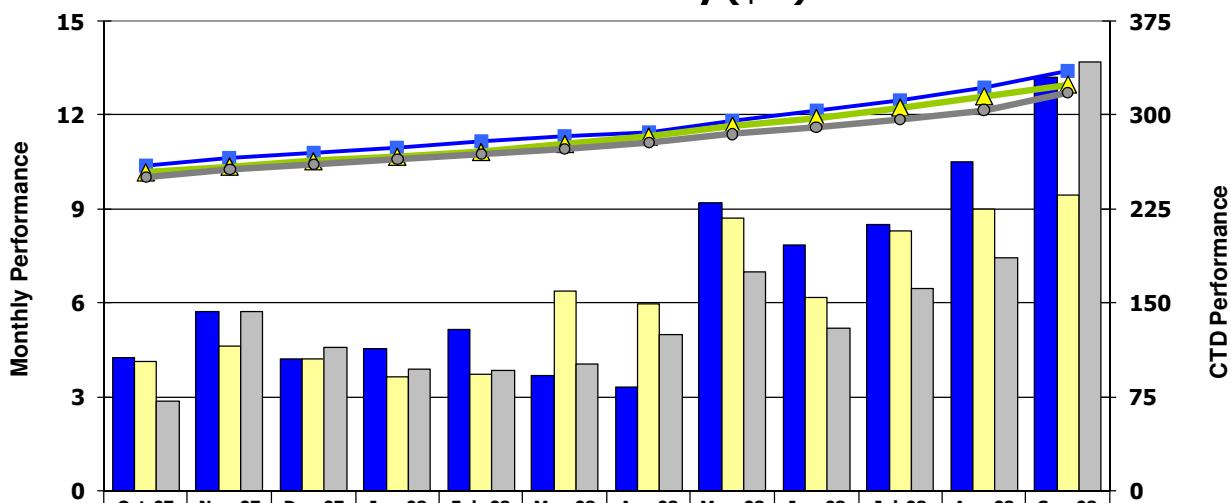
- Delays in UW-1 work plan, and numerous GPP/capital equipment and RI/FS delays.

The favorable CV for Reliability Projects (less than \$0.1M) is primarily due to the following:

- Efficiencies and favorable bids in prior year electrical projects (+\$1.5M), road refurbishments (+\$0.7M) capital equipment procurements (+\$0.9M), Project L-429, *12-Inch Water Line Mortar Lining Along 4th Street from Baltimore to Canton*, (+\$0.5M). and other miscellaneous workscope (+\$0.1).
- Offset by increase in steel prices for prior year facility and water projects (-\$3.2M), and prior year telecommunication projects technology deployment (-\$0.5M).

The favorable CV for Closure Services (+\$0.6M) is within established thresholds.

Performance Analysis CTD and Monthly (\$M)



Monthly BCWS	4.3	5.7	4.2	4.5	5.1	3.7	3.3	9.2	7.9	8.5	10.5	13.2
Monthly BCWP	4.1	4.6	4.2	3.6	3.7	6.4	6.0	8.7	6.2	8.3	9.0	9.4
Monthly ACWP	2.9	5.7	4.6	3.9	3.8	4.0	5.0	7.0	5.2	6.5	7.4	13.7
CTD BCWS	259.9	265.6	269.8	274.4	279.5	283.2	286.5	295.7	303.6	312.1	322.6	335.8
CTD BCWP	254.4	259.0	263.3	266.9	270.6	277.0	283.0	291.7	297.9	306.1	315.1	324.6
CTD ACWP	250.9	256.6	261.2	265.1	268.9	273.0	278.0	285.0	290.1	296.6	304.0	317.7

Milestone Achievement

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The FY 2008 Enforceable Agreement milestone information provided herein is based upon the current baseline including RL-approved changes. Changes from month-to-month in both the total number of milestones to be completed and in the forecast status of upcoming milestones are the result of Baseline Change Requests (BCRs) approved during the reporting period.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
CPDD-07-004	212-N nuclear facility hazard reduction and downgrade completed	RL	11/30/07	10/25/07		Complete
M-091-40L-016	M-91-40L.4.D Quarterly Burial Ground vent/substrate sampling results (1st Qtr 2008)	HQ	12/15/07	11/21/07		Complete
CPDD-07-008	Complete Construction of Project L-626, 100B-A Water System Enhancement	RL	12/31/07	12/11/07		Complete
M-091-40L-017	M-91-40L.5.A Quarterly Burial Ground vent/substrate sampling results (2nd Qtr 2008)	HQ	3/15/08	2/25/08		Complete
CPDD-07-0010	Complete phase one of the BC Cribs and Trenches Treatability Test Plan	RL	3/30/08	3/28/08		Complete
CPDD-08-001	241-U-361 Settling Tank Characterization and Sampling completed	RL	3/31/08	3/4/08		Complete
M-091-40L-018	M-91-40L.5.B Quarterly Burial Ground vent/substrate sampling results (3rd Qtr 2008)	HQ	6/15/08	5/30/08		Complete
CPDD-08-004	Complete phase 2a of the BC Cribs and Trenches Treatability Test Plan	RL	7/31/08	7/16/08		Complete
M-15-40D	Submit Revised Feasibility Study Report and Revised Proposed Plan for the 200-CW-5 OU	HQ	7/31/08	7/15/08		Complete
M-091-40L-019	M-91-40L.5.C Quarterly Burial Ground vent/substrate sampling results (4th Qtr 2008)	HQ	9/15/08	8/13/08		Complete
CPDD-08-003	Complete characterization of potential contamination plume in the BC Cribs and Trenches	RL	9/30/08	9/26/08		Complete
CPDD-08-006	Complete 231Z nuclear facility hazard reduction	RL	9/30/08	8/25/08		Complete
CPDD-08-011	Excavate 20,000 tons of contaminated Soil at BC Control Area	RL	9/30/08	9/8/08		Complete
CPRP-08-001	Complete construction for Project L-641, 273E Safety Enhancements	RL	10/31/08	8/12/08		Complete
CPRP-08-002	Complete construction for Project L-645, 100N Hanford Fire Department Potable Water System	RL	11/26/08		3/20/09	Behind schedule